

Letters to the Editor . . .

Dangers of Cure-Alls: Multiple Vitamin Mixtures in Pernicious Anemia

In the past, the development of neurological symptoms in pernicious anemia prior to anemia has been unusual. However, Conley and Krevans¹ observed that five out of ten patients with previously unrecognized pernicious anemia observed at Johns Hopkins Hospital in the year 1950 complained only of the neurological symptoms and had little or no anemia. Investigation revealed that each patient had been taking multivitamin preparations. In four of the five it was possible to identify the preparation used, and in each there was enough folic acid to produce a hematologic remission in patients with pernicious anemia.

A survey of proprietary vitamin products widely available as of January 1951 revealed that more than 80 contained folic acid despite the relatively limited occurrence of folic acid deficiency states. The recommended dose of these preparations was sufficient to supply at least 5 mg. of folic acid daily—enough to maintain prolonged hematologic remission in pernicious anemia.² On the other hand, although the blood of persons with pernicious anemia who are taking such vitamin complexes may remain normal, subacute combined degeneration³ may develop progressively.

The *Journal of the American Medical Association* in a recent editorial⁴ emphasized the danger of masking pernicious anemia through the use of such multivitamin preparations containing folic acid. Since there is a growing tendency on the part of some manufacturing pharmacists to offer a variety of multiple mixtures as a cure-all for a host of ills, in the future physicians may expect to see a number of variants of diseases which are due to one or another masked deficiency.

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REFERENCES

1. Conley, C. L., and Krevans, J. R.: Development of neurologic manifestation of pernicious anemia during multivitamin therapy, *New England Journal of Medicine*, 245: 529, Feb. 1951.
2. Bethell, F. H., et al.: Further studies on utilization of pteroyl hexaglutamyl glutamic acid (vitamin B₁₂ conjugate) in pernicious anemia, *J. Lab. & Clin. Med.*, 32:337, 1947.
3. Vilter, C. F., Vilter, R. W., and Spies: Treatment of pernicious and related anemias with synthetic folic acid, *J. Lab. and Clin. Med.*, 32:262, 1947.
4. *Journal of the American Medical Association*, 148:57, Jan. 5, 1952.

Cultures for Diagnosis of Diphtheria

I believe that it might be appropriate to suggest to the profession a warning regarding reliance upon throat cultures as a dependable means for the diagnosis of diphtheria under conditions which now exist.

Within the memory of many present-day physicians diphtheria was a constant threat and throat cultures were routine in every case of tonsillitis with or without exudate. Because of almost universal immunization, children are now protected by their own artificially induced immunity and additionally are protected by the immunity of those with whom they are in contact. Adults are similarly protected by diminution in the possibilities of exposure even though they are not themselves immune to the infection. Infectious mononucleosis and other infections of the throat which may simulate diphtheria have accordingly become much commoner than diphtheria and the physician is no longer alert to diphtheria as an ever-present menace.

The history of this disease, however, is one of periodic alterations in prevalence, and the future will doubtless see challenge to the immune state of those subjected to immunizing injections and to that of adults who have not been given such protection.

The especial warning applies to the fact that diphtheria is no longer suspected by the clinician at the onset of many throat infections, and in many cases, as judged by the experience in a communicable disease hospital, throat cultures will first be employed only after the patient has received one or more injections of penicillin. Penicillin is not an effective agent in the treatment of diphtheria; antitoxin is the only acceptable means of therapy. Nevertheless, experience in the treatment of the carrier state indicates that the growth of diphtheria bacilli on culture from the throat may be completely inhibited by injections of this antibiotic. Accordingly reliance upon throat cultures for the diagnosis of diphtheria necessitates that cultures be taken before any antibiotic agent is given to the patient. At the moment the problem does not seem to be of serious proportions but if the natural history of the disease is repeated in the near or distant future, it will be readily possible for many cases of diphtheria to escape detection until clinical symptoms have reached a dangerous level unless material for culture is taken from the throat before the administration of antibiotic drugs.

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